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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/017,360	12/14/2001	Charles Trushell	US010673	8092

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EXAMINER

GUHARAY, KARABI

ART UNIT PAPER NUMBER

2879

DATE MAILED: 08/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/017,360

Applicant(s)

TRUSHELL, CHARLES

Examiner

Karabi Guharay

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Amendment, filed 25 May 2004.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 17-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16, 21-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Amendment, filed on 25 May 2004 has been considered and entered.

Amendment of claim 2 overcomes the objections to the claims 2-9.

Amendment of claim 12 overcomes the rejection of claims 12-16 under 35 U.S.C 112 second paragraph.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-16, and 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Trushell (US 5552665), in view of Kaduk et al. (US 3875455).

Regarding claim 1, Trushell discloses an electric lamp (Fig 1) consisting essentially a lamp envelope (3) having an inner surface (15), means within the lamp for generating UV radiation, a layer of a luminescent material (17) adjacent the inner surface of the lamp envelope for generating visible light when impinged by the UV radiation, a reflective layer (16) being disposed between the inner surface of the lamp envelope and the luminescent layer (Fig 1) for reflecting UV radiation which has passed through the layer of luminescent material back into the luminescent layer for increasing the visible light output of the luminescent layer, the reflective layer consisting of particulate non-fluorescent oxidic material (gamma-alumina, lines 41-56 of column 2, and lines 45-61 of column 4), further process limitations are not given any patentable

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weight since method of forming the device is not germane to the issue of patentability of the device itself.

But Trushell fail to disclose a getter material mixed with the UV reflective oxidic material.

However, in the same field of electric lamp Kaduk et al. disclose an undercoat layer containing UV reflecting material of alumina particulate as in Trushell's device together with a getter material comprising a thermally decomposed getter precursor, MgO (lines 1-24 of column 3), for gettering action on the gas fill in the lamp (lines 51- 54 of column 4).

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to mix a getter material in the undercoat layer, as disclosed by Kaduk et al., in the device of Trushell, such undercoat layer will provide reflection of light as well as gettering action on the gas fill of the lamp.

Regarding claim 2, Kudak discloses that the reflective layer (undercoat layer 11) comprises sintered mixture of particulate aluminum oxide and a getter material of alkaline earth metal oxide (MgO), which is a getter material. Further limitation of method of forming the mixture is not germane to the patentability of the lamp. The same reason for combining art as in claim 1 applies.

Regarding claim 3, Kudak discloses that the undercoat layer 11 is sintered prior to the envelope being sealed (see 47-63 of Col 3). The same reason for combining art as in claim 1 applies.

Regarding claims 4, 6 & 8, Kudak discloses that the getter material includes MgO. The same reason for combining art as in claim 1 applies.

Claims 5 & 9, Kudak recites sintered mixture comprises a thermal decomposition of a mixture of a soluble oxide precursor of alkaline earth metal (MgO) in aqueous suspension of aluminum oxide (lines 1-24 of column 3).

Regarding claim 7, Trushell discloses that the phosphor layer comprises halophosphate phosphor (line 20 of Col 5).

Regarding claim 10, Trushell discloses that the means for generating ultraviolet radiation comprises a filling of an ionizable material, a rare gas and a pair of discharge electrode 6 (lines 45-56 of column 4).

Regarding claim 11, Trushell discloses that the pair of discharge electrodes 6 each adjacent a respective sealed end (Fig 1).

Regarding claim 12, Trushell discloses a low pressure mercury vapor fluorescent lamp (Fig 1) comprising a tubular light transmissive lamp envelope 3, having opposing sealed ends 12, a filling of mercury and a rare gas, a pair of discharge electrodes 6 arranged at a respective sealed end (stem 11) of the envelope, means for connecting electrodes (leads 7,9) to the source of electric potential outside of the lamp envelope, a single light transmissive and UV radiation reflecting layer (undercoat layer 16, comprising of an aluminum oxide material, and a layer of luminous material (phosphor layer 12) disposed on the undercoat layer 11 (Fig 1, lines 45-61 of col 4) .

But Trushell fail to disclose a getter material mixed with the UV reflective oxidic material.

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However, in the same field of electric lamp Kaduk et al. disclose an undercoat layer containing UV reflecting material of alumina particulate as in Trushell's device together with a getter material comprising a thermally decomposed getter precursor, MgO (lines 1-24 of column 3), for gettering action on the gas fill in the lamp (lines 51- 54 of column 4).

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to mix a getter material in the undercoat layer, as disclosed by Kaduk et al., in the device of Trushell, such undercoat layer will provide reflection of light as well as gettering action on the gas fill of the lamp.

Regarding claim 13, Kudak discloses that the reflective layer (undercoat layer 11) comprises sintered mixture of particulate aluminum oxide and a getter material of alkaline earth metal oxide (MgO), which is a getter material. The same reason for combining art as in claim 1 applies.

Further limitation of method of forming the mixture is not germane to the patentability of the lamp.

Regarding claim 14, Kudak discloses that the undercoat layer 11 is sintered prior to the envelope being sealed (see 47-63 of Col 3).

Regarding claim 15, Kudak discloses that the getter material includes MgO.

Regarding claim 16, Kudak discloses that the sintered mixture comprises a thermal decomposition of a mixture of a soluble oxide precursor of alkaline earth metal (MgO) in aqueous suspension of aluminum oxide (lines 1-24 of column 3).

Regarding claims 21-24, Trushell discloses a single reflective layer (16) directly disposed on the inner surface (15) of the lamp envelope and is continuous and aperture free.

Response to Arguments

Applicant's arguments with respect to claims 1-16 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

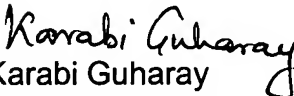
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karabi Guharay whose telephone number is (571) 272-2452. The examiner can normally be reached on Monday-Friday 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar D. Patel can be reached on (571) 272-2457. The fax phone number for the organization is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Karabi Guharay
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